Amendments to the Claims:

1.   (canceled)

2.   (canceled)

3.   (canceled)

4.   (canceled)

5.   (canceled)

6.   (currently amended) A system for transmitting a sequence of digital images over a communication network, comprising:

a storage device for storing a sequence of digital images;

a client computer coupled to the communication network, wherein the client computer generates a request for interaction with the sequence of images stored on the image storage device, the request specifying a quality threshold and including a request list specifying data blocks that define a region of interest within the sequence of digital images; and

a server computer coupled to the communication network and the image storage device, wherein the server computer, in response to the request list, transmits to the client computer a number of data blocks corresponding to the specified quality threshold.

a client computer coupled to the communication network, said client computer operative to generate and transmit across the communication network a request for interaction with the image sequence stored on said image storage device, said request for interaction comprising a request list specifying data blocks for rendering a region of interest (ROI) within said image sequence; and

a server computer coupled to the communication network and said image storage device, the server computer adapted to perform the steps of preprocessing said image sequence through a three dimensional wavelet transform, receiving said request list from the client computer and progressively transmitting to said client

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computer <u>three dimensional</u> subband coefficient data blocks corresponding to said region of interest.

7.   (canceled)

8.   (canceled)

9.   (canceled)

10.   (currently amended) The system according to claim 6, wherein:

the request generated by the client computer specifies a resolution; and

the server computer provides a number of <u>three dimensional</u> data blocks corresponding to ~~the specified quality threshold and~~ <u>said</u> resolution.

11.   (canceled)

12.   (canceled)

13.   (canceled)

14.   (canceled)

15.   (canceled)

16.   (currently amended) A method for transmitting a sequence of digital images from a server computer to a client computer over a communication network, <u>said</u> method comprising the steps of:

storing a sequence of digital images on a storage device;

~~the client computer generating a request for interaction with the sequence of images stored on the image storage device, the request specifying a quality threshold and including a request list specifying data blocks that define a region of interest within the sequence of digital images; and~~

~~transmitting from the server computer to the client computer, via the communication network, a number of data blocks corresponding to the specified quality threshold.~~

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a client computer coupled to said communication network generating and transmitting across said communication network a request for interaction with an image sequence stored on said storage device, said request for interaction comprising a request list specifying data blocks for rendering a region of interest (ROI) within said image sequence;

a server computer coupled to said communication network and said image storage device performing two dimensional subband transform decompositions in x-axis and y-axis directions on each frame to yield a two-dimensionally transform-decomposed digital image;

said server computer performing a one dimensional subband transform decomposition in a z-axis direction on a portion of said two-dimensionally transform-decomposed digital image; and

said server computer progressively transmitting to said client computer three dimensional subband coefficient data blocks corresponding to said region of interest.

17.   (canceled)

18.   (canceled)

19.   (canceled)

20.   (currently amended) The method according to claim 16, further comprising the steps of:
including in the request generated by the client computer a specified resolution; and
providing a number of three dimensional data blocks from the server computer that correspond to the specified quality threshold and said resolution.

21.   (canceled)

22.   (canceled)

23.   (canceled)

24.   (canceled)

25.   (canceled)

26.   (currently amended) ~~A computer program product for communicating a sequence of digital images over a communication network, the sequence of images stored on an image storage device accessible via the communication network, the computer program product comprising one or more computer data media carrying thereon:~~

   ~~a client portion effecting a client computer request for interaction with the sequence of images stored on the image storage device, the request specifying a quality threshold and including a request list specifying data blocks that define a region of interest within the sequence of digital images and a server computer portion effecting in a server computer, in response to the request list, transmission to the client computer of a number of data blocks corresponding to the specified quality threshold.~~

A server for progressive streaming of sequences of digital images to a client over a communications network, comprising:

   an image storage device for storing a sequence of digital images;

   a processor in communication with said image storage device and adapted to perform the steps of preprocessing the image sequence through a three dimensional forward wavelet transform to yield three dimensional wavelet coefficient data;

   storing said three dimensional wavelet coefficient data in a memory cache;

   receiving a request for one or more three dimensional data blocks from said client, each three dimensional data block corresponding to a region of interest;

   if a requested three dimensional data block is not present in the memory cache, performing the step of preprocessing on a minimum portion of a region of interest requiring processing; and

   transmitting to said client three dimensional subband coefficient data blocks corresponding to said region of interest.

27.   (canceled)

28.   (canceled)

29.   (canceled)

30. (currently amended) The ~~computer program product~~ <u>server</u> according to claim 26, wherein[[:]] <u>said three dimensional wavelet transform comprises the steps of:</u>

~~the client computer request specifies a resolution; and~~

~~the server portion effects in the server computer a step of providing a number of data blocks corresponding to the specified quality threshold and resolution.~~

<u>performing two dimensional subband transform decompositions in x-axis and y-axis directions on said image sequence to yield two-dimensionally transform-decomposed digital images; and</u>

<u>performing a one dimensional subband decomposition in a z-axis direction on a portion of said two-dimensionally transform-decomposed image sequence.</u>

31. (currently amended) The system according to claim 6, wherein said ~~data blocks comprise encoded subband coefficients~~ <u>three dimensional wavelet transform comprises the steps of:</u>

<u>performing two dimensional subband transform decompositions in x-axis and y-axis directions on said image sequence to yield a two-dimensionally transform-decomposed digital image; and</u>

<u>performing a one dimensional subband decomposition in a z-axis direction on a portion of said two-dimensionally transform-decomposed image sequence.</u>

32. (currently amended) The system according to claim 6, ~~wherein said data blocks comprise encoded wavelet coefficients generated using a three-dimensional lossless wavelet transform~~ <u>further comprising the step of transmitting to said client computer data representing thumbnail resolution images.</u>

33. (currently amended) The system according to claim 6, wherein said ~~data blocks are generated by the server computer in response to the request from the client computer~~ <u>request list generated by said client computer specifies a quality threshold and said server computer sends three dimensional subband coefficient data blocks corresponding to said quality threshold.</u>

34. (previously presented) The system according to claim 6, wherein said client computer comprises means for requesting fewer quality layers if an image is mapped in accordance with a luminance mapping function to a viewing device having fewer bits per pixel than that of said image.

35. (currently amended) The method according to claim 16, ~~wherein said data blocks comprise encoded subband coefficients~~ further comprising the step of said server computer transmitting to said client computer data representing thumbnail resolution images.

36. (currently amended) The method according to claim 16, wherein said ~~data blocks comprise encoded wavelet coefficients generated using a three-dimensional lossless wavelet transform~~ request list generated by said client computer specifies a quality threshold and said server computer sends three dimensional subband coefficient data blocks corresponding to said quality threshold.

37. (currently amended) The method according to claim 16, wherein said ~~data blocks are generated by the server computer in response to the request from the client computer~~ server computer progressively transmits said three dimensional subband coefficient data blocks to said client computer using one of the following three modes: progressive by accuracy, progressive by resolution or progressive by spatial order.

38. (previously presented) The method according to claim 16, wherein said client computer requesting fewer quality layers if an image is mapped in accordance with a luminance mapping function to a viewing device having fewer bits per pixel than that of the image.

39. (currently amended) The ~~computer program product~~ server according to claim 26, ~~wherein said data blocks comprise encoded subband coefficients~~ further comprises the step of transmitting to said client computer data representing thumbnail resolution images.

40. (currently amended) The ~~computer program product~~ server according to claim 26, wherein said ~~data blocks comprise encoded wavelet coefficients generated using a three-dimensional lossless wavelet transform~~ request received from the said client computer specifies a quality threshold and said server computer sends three dimensional subband coefficient data blocks corresponding to said quality threshold in response thereto.

41. (currently amended) The ~~computer program product~~ server according to claim 26, wherein said ~~data blocks are generated by the server computer in response to the request from the client computer~~ server computer is operative to progressively transmit said three dimensional

subband coefficient data blocks to said client computer using one of the following three modes: progressive by accuracy, progressive by resolution or progressive by spatial order .

42.   (currently amended) The ~~computer program product~~ server according to claim 26, wherein said processor is further adapted to perform the step of receiving from ~~client portion further comprises means for effecting~~ said client computer [[to]] a request for fewer quality layers if an image is mapped in accordance with a luminance mapping function to a viewing device having fewer bits per pixel than that of the image.

43.   (new) A computer program product characterized by that upon loading it into computer memory an image sequence streaming process is executed, the computer program product comprising:

    a computer useable medium having computer readable program code means embodied in said medium for progressively streaming sequences of digital images to a client over a communications network, said computer program product comprising:

    computer readable program code means for preprocessing said image sequence through a three dimensional forward wavelet transform to yield three dimensional subband coefficient data;

    computer readable program code means for storing said three dimensional subband coefficient data in a memory cache;

    computer readable program code means for receiving a request for one or more three dimensional data blocks from said client, each data block corresponding to a region of interest;

    computer readable program code means for performing the step of preprocessing on a minimum portion of the region of interest requiring processing if a requested data block is not present in said memory cache; and

    computer readable program code means for transmitting to the client three dimensional subband coefficient data blocks corresponding to said region of interest.

44.   (new) The computer program product according to claim 43, further comprising computer readable program code means for transmitting to said client data representing thumbnail resolution images.

45.   (new) The computer program product according to claim 43, further comprising computer readable program code means for sending three dimensional subband coefficient data blocks corresponding to a quality threshold to said client in response to a request list received therefrom.

46.   (new) The computer program product according to claim 43, wherein the computer readable program code means for transmitting comprises computer readable program code means for progressively transmitting said three dimensional subband coefficient data blocks to said client using one of the following three modes: progressive by accuracy, progressive by resolution or progressive by spatial order.

47.   (new) The computer program product according to claim 43, wherein said three dimensional data block comprises x, y, z and quality layer information.

48.   (new) The computer program product according to claim 43, wherein said three dimensional data block comprises x, y, z, resolution and quality layer information.

49.   (new) The system according to claim 6, wherein said three dimensional data block comprises x, y, z and quality layer information.

50.   (new) The system according to claim 6, wherein said three dimensional data block comprises x, y, z, resolution and quality layer information.

51.   (new) The method according to claim 16, wherein said three dimensional data block comprises x, y, z and quality layer information.

52.   (new) The method according to claim 16, wherein said three dimensional data block comprises x, y, z, resolution and quality layer information.

53.   (new) The server according to claim 26, wherein said three dimensional data block comprises x, y, z and quality layer information.

54.   (new) The server according to claim 26, wherein said three dimensional data block comprises x, y, z, resolution and quality layer information.